

Remarks

The Office Action mailed December 15, 2003 has been received and reviewed. Claims 1, 2, 6, 9, 10, and 17 having been amended, and claims 5, 13, 16, and 18 having been canceled, the pending claims are claims 1-4, 6-12, 14-15, 17, and 19-22. Reconsideration and withdrawal of the rejections are respectfully requested.

Information Disclosure Statement

The Examiner's attention is directed to the accompanying Information Disclosure Statement. Applicant's Representatives respectfully submit that the duty of disclosure has been met by this and previous submissions and that no further legal requirement exists for statements of relevance. Accordingly, the Examiner is requested to consider all documents submitted.

Affirmation of Provisional Election

An election to prosecute claims 1-8 and 17-22, Group I, was made in a Response to Restriction Requirement filed with the Patent Office on September 29, 2003.

Applicant's Representatives ask that the Examiner reconsider the restriction, especially with respect to Group II (claims 9-15). Both Groups are drawn to an NMR method of identifying a binding site, classified in class 324, subclass 307. Although the Group I claims do not require obtaining a quantum correlation spectrum as required by the Group II claims, they do not exclude it.

Applicant's Representatives submit that the inventions as claimed can be readily evaluated in one search without placing undue burden on the Examiner. Applicant reserves the right to pursue examination of the non-elected claims in continuation or divisional applications.

The 35 U.S.C. §112, First Paragraph, Rejection

The Examiner rejected claims 1-8 and 17-22 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in

such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Although Applicant's Representatives do not agree with the Examiner, amendments to the claims have been made as suggested by the Examiner in the interest of expediting prosecution. Applicant respectfully requests that this rejection be withdrawn.

The Examiner rejected claims 1-8 and 17-22 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Although Applicant's Representatives do not agree with the Examiner, amendments to the claims have been made as suggested by the Examiner in the interest of expediting prosecution. Applicant respectfully requests that this rejection be withdrawn.

The 35 U.S.C. §112, Second Paragraph, Rejection

The Examiner rejected claims 1-8 and 17-22 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner objected to the language of claims 1 and 17 (and claims dependent thereupon) as being allegedly confusing in that the first method steps recite "atoms" but is not modified by ligand or protein.

Although Applicant's Representatives do not agree with the Examiner, amendments to the claims have been made to clarify that protein atoms were intended. Applicant respectfully requests that this rejection be withdrawn.

The 35 U.S.C. §103 Rejection

The Examiner rejected claims 1-8 and 17-22 under 35 U.S.C. §103(a) as being unpatentable over Veeraraghavan et al., "Structural Correlates for Enhanced Stability in the E2

DNA-Binding Domain from Bovine Papillomavirus," *Biochemistry*, 1999;38(49):16115-16124, or Veeraraghavan et al., "¹H, ¹⁵N, and ¹³C NMR Resonance Assignments for the DNA-Binding Domain of the BPV-1 E2 Protein," *Journal of Biomolecular NMR*, 1998;11(4):457-458, or Hajduk et al., "NMR-Based Discovery of Lead Inhibitors That Block DNA Binding of the Human Papillomavirus E2 Protein," *J. Med. Chem.*, 1997;40(20):3144-3150. This rejection is respectfully traversed.

It is respectfully submitted that none of the cited documents teach or suggest a method of identifying a binding site in a DNA-binding and dimerization domain of an HPV-18 strain of papillomavirus E2 protein. The two Veeraraghavan et al. documents deal with bovine papillomavirus and Hajduk et al. deal with human papillomavirus. Although NMR methods are used in these documents, methods of the present invention do not simply involve the use of the data in Table 1, for example, as "nonfunctional descriptive material which does not distinguish the invention from the prior art." This information is correlated to the structure of the HPV-18 strain of papillomavirus E2 protein and thus involves identifying structural motifs within that particular protein. Applicant respectfully requests that this rejection be withdrawn.

Amendment and Response

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For: NUCLEAR MAGNETIC RESONANCE METHODS FOR IDENTIFYING SITES IN PAPILLOMAVIRUS E2
PROTEIN

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Summary

It is respectfully submitted that the pending claims 1-4, 6-12, 14-15, 17, and 19-22 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
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CERTIFICATE UNDER 37 CFR §1.10:

"Express Mail" mailing label number: **EV 405459085 US**

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The undersigned hereby certifies that the Transmittal Letter and the paper(s) and/or fee(s), as described hereinabove, are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: SAM HER
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